GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT INITIATION

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Date: 10/25/78

Project Title: A Microprocessor Design Laboratory -- Acquisition of Instructional Scientific Equipment

Project No: E-21-523

Project Director: Dr. John B. Peatman

Sponsor: National Science Foundation

Agreement Period: From 9/1/78 Until 1/31/81 (Grant Period)

Type Agreement: Grant No. SER78-12651

Amount: $17,100 NSF
17,100 GIT (E-21-262)
$34,200 Total

Reports Required: Annual Progress Report; Final Project Report

Sponsor Contact Person (s):

Technical Matters

(NSF Program Manager)
John A. Maccini
Instructional Scientific
Equipment Program - ISEP
Division of Science Education
Resources Improvement
National Science Foundation
Washington, D. C. 20550

202/282-7751

Contractual Matters

(thru OCA)
(NSF Grants Manager)
Ms. Mary Frances O'Connell
Grants Specialist, Area 4
MPE/BBS/SE Branch
Division of Grants & Contracts
National Science Foundation
Washington, D. C. 20550

202/632-2858

Defense Priority Rating: n/a

Assigned to: Electrical Engineering (School/Laboratory)

COPIES TO:

- Project Director
- Division Chief (EES)
- School/Laboratory Director
- Dean/Director—EES
- Accounting Office
- Procurement Office
- Security Coordinator (OCA)
- Reports Coordinator (OCA)
- Library, Technical Reports Section
- EES Information Office
- EES Reports & Procedures
- Project File (OCA)
- Project Code (GTRI)
- Other

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GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION

SPONSORED PROJECT TERMINATION

Date: May 4, 1981

Project Title: A Microprocessor Design Laboratory -- Acquisition of Instructional Scientific Equipment

Project No: E-21-523

Project Director: Dr. John B. Peatman

Sponsor: National Science Foundation

Effective Termination Date: ~~1/31/81~~

Clearance of Accounting Charges: 1/31/81

Grant/Contract Closeout Actions Remaining:

_ Final Invoice and Closing Documents
X Final Fiscal ~~Report~~ Accounting (FCTR)
X Final Report of Inventions
_ Govt. Property Inventory & Related Certificate
_ Classified Material Certificate
_ Other _____

Assigned to: EE (School/Laboratory)

COPIES TO:

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Reports Coordinator (OCA)
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Library, Technical Reports
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Project File (OCA)
Other: _____

E-21-523

Annual Progress Report

National Science Foundation Grant No. SER78-12651

A MICROPROCESSOR DESIGN LABORATORY

John B. Peatman, Project Director

November 1979

Introduction

This laboratory development program is proceeding well towards the achievement of its goal. Our present microprocessor design laboratory provides one development system and student preparation of software to drive hardware configured by the laboratory staff. The new laboratory organization will provide eight stations and will permit students to configure hardware and then develop the software to drive it.

Laboratory Organization

Today's integrated circuit technology has moved to the point where an instrument design should probably be a multiple microcomputer design. This laboratory development project has moved ahead to support such an organization. It will employ Motorola 6801 one-chip microcomputers in a "one master, several slaves" scheme and will take advantage of their built-in UARTs to support a two-wire I/O bus between microcomputers.

The interactions between software developed on our campus computer and the exercising of that software on eight development stations will be handled with the help of two personal computers. Each unit will be shared by four stations simultaneously. The computers will also permit some monitoring capability of the activity going on in each development station. Logic state analyzers will permit more detailed monitoring of development station activity when that is required.

Present Status and Work Remaining

The capital equipment required for the laboratory has been purchased as well as many of the components required for construction of the modular development stations. The hardware and software needed to support interactions between each personal computer and its four development stations are in the process of being developed. Each station will be supported by a small monitor which has yet to be developed. Several interfaces are in the process of development by students in the present laboratory.

It is intended that the new laboratory capability will be introduced little by little during the next year. The project should be completely on line in 1980.